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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Anne-Marie Gesret

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12/30/2004

SUGHRUE, MION, ZINN, MACPEAK & SEAS
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EXAMINER

PATHAK, SUDHANSHU C

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 12/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/801,697	GESRET ET AL.	
	Examiner	Art Unit	
	Sudhanshu C. Pathak	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on August 4th, 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 14-19 is/are rejected.
- 7) ☒ Claim(s) 12, 13, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on August 4th, 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-to-21 are pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected by 35 U.S.C. 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of Yoneyama (6,459,724).

Regarding to Claim 1, the Applicant Admitted Prior Art (AAPA) discloses a method of acquiring slot timing when synchronizing a direct sequence spread spectrum communications receiver with transmission of a network base station (Fig. 1 & Specification, Page 1, lines 6-13), the method comprising the steps of repetitively correlating a synchronizing code received over a radio channel with a synchronization code in the receiver (Fig. 1-2 & Specification, Page 2, lines 18-27 & Specification, Page 3, lines 9-12, 22-27); and selecting the resulting correlation peaks with the highest value (Specification, Page 3, lines 13-16, 22-27). However, the AAPA does not disclose assigning a value to the correlation peaks and further ranking the assigned peaks.

Yoneyama discloses a method and apparatus for slot timing detection, in a mobile communication system constituted by mobile and base stations, using only data above a predetermined threshold value (Abstract, lines 1-15 &

Column 6, lines 3-67 & Column 5, lines 65-67) comprising assigning a value to the correlation peaks (Column 3, lines 40-44 & Fig. 9 & Fig. 10, element 82 & Fig. 8, element 11 & Column 6, lines 3-67) and ranking the resulting peaks according to the assigned values (Fig. 9, Fig. 10, element 83 & Abstract, lines 1-15 & Column 6, lines 3-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Yoneyama teaches assigning the correlation peaks a value and ranking the resulting peaks, and this can be implemented in the system as described in the AAPA so as to minimize the storage capacity required for synchronizing the slot timing calculation processing, further reducing the circuit size thus satisfying the limitation of the claim.

4. Claims 2-11 & 14-17 are rejected by 35 U.S.C. 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of Yoneyama (6,459,724) in further view of Brison et al. (6,005,985).

Regarding to Claims 2-9, the AAPA in view of Yoneyama discloses a method for acquiring the slot timing in a direct sequence spread spectrum communications system comprising repetitively correlating a synchronization code, assigning the repetitive correlation peaks a value, ranking the peaks according to the assigned values, and selecting the peaks with the highest ranking as described above. Yoneyama also discloses the assigned value to correspond to the power of the correlation peak (Column 3, lines 40-44 & Fig. 9 & Fig. 10, element 82 & Fig. 8, element 11 & Column 6, lines 3-67).

Yoneyama further discloses storing (rearranging) the correlation power values

Art Unit: 2634

in decreasing order (Abstract, lines 1-3 & Fig. 10, element 91 & Column 6, lines 3-20 & Column 8, lines 21-26, 45-54). However, the AAPA in view of Yoneyama does not disclose the assigned value is assigned as a set of numbers, corresponding to measured parameters, and further one of the numbers in the set of numbers corresponding to the position of the correlation peak.

Brison discloses a post-processing system of a correlator, which detects and ranks peaks in the correlation image (Abstract, lines 1-2). Brison further discloses assigning a value to the correlation peaks as a set of numbers, corresponding to a measured parameter, and further one of the numbers in the set of numbers corresponds to a position of a resulting peak (Fig. 5 & Abstract, lines 8-14 & Column 2, lines 58-67 & Column 6, lines 28-50). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Brison teaches assigning the correlation peaks a value corresponding to a set of numbers and the set of numbers can further correspond to a variety of figure-of-merit values and location of the correlation peaks and this can be implemented in the correlation processing in the communications receiver as described in AAPA in view of Yoneyama and further the power value can be implemented in the report to correspond to one of the numbers of the set of numbers, thus providing a detailed description of the correlation, so as to provide a compact and speed processing of the correlation data on the ranked correlation peaks.

Furthermore, assigning the order of the correlation peak, a one of the set off

numbers assigned to the peak, in the storing report as described in Brison for the correlation is a matter of design choice there is no specific criticality in storing this parameter as an identifier for the correlation peaks.

Regarding to Claims 10-11 & 14-17, the AAPA in view of Yoneyama discloses a method for acquiring the slot timing in a direct sequence spread spectrum communications system comprising repetitively correlating a synchronization code; assigning the repetitive correlation peaks a value, as a set of numbers; ranking the peaks according to the assigned values; and selecting the peaks with the highest ranking as described above. However, AAPA in view of Yoneyama does not disclose computing the ranking parameter from a subset of assigned values.

Brison discloses a post-processing system of a correlator, which detects and ranks peaks in the correlation image (Abstract, lines 1-2). Brison further discloses computing a ranking parameter from the assigned values (Claim 9 & Fig. 5 & Abstract, lines 8-14 & Column 2, lines 58-67 & Column 6, lines 28-50). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Brison teaches computing the figure-of-merit as a ranking parameter for the correlation peak and this can be implemented in the receiver as described in the AAPA in view of Yoneyama, so as to provide a compact and speed processing of the correlation data on the ranked correlation peaks. Furthermore, there is no criticality in having the parameters used to compute the figure-of-merit to be a subset of the

Art Unit: 2634

assigned values; this is a matter of design choice, and the ranking parameter can be a subset or any other additional factor.

5. Claims 18 & 19 are rejected by 35 U.S.C. 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of Yoneyama (6,459,724) in further view of Brison et al. (6,005,985) in further view of Hoffberg (6,252,544).

Regarding to Claims 18 & 19, the AAPA in view of Yoneyama in further view of Brison discloses a method for acquiring the slot timing in a direct sequence spread spectrum communications system comprising repetitively correlating a synchronization code; assigning the repetitive correlation peaks a value, as a set of numbers; ranking the peaks according to the assigned values; and selecting the peaks with the highest ranking as computed from the assigned and non assigned parameters as described above. However, the above references do not disclose the ranking parameter to be computed by multiple factors including the age of the data.

Hoffberg discloses a mobile communications device comprising a location sensing system and memory for communicating the event and location of the event to a remote system (Abstract, lines 1-8 & Column 22, lines 15-40).

Hoffberg further discloses the system preferably ages the event data intelligently allowing certain types of data for events to expire or decrease in importance (Column 22, lines 53-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Hoffberg discloses using the age of the data as a parameter in the computation of the

figure-of-merit and this can be implemented in the system as described in AAPA in view of Yoneyama in further view of Brison so as to provide a more accurate figure-of-merit comprising the latest data, thus satisfying the limitations of the claims.

Allowable Subject Matter

6. Claims 12-13 & 20-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments filed on August 4th, 2004 have been fully considered but they are not persuasive.

In regards to the arguments presented the Applicant Admitted Prior Art (AAPA) discloses all the limitations recited in Claim 1, except, the AAPA does not disclose assigning a value to the correlation peaks and further ranking the assigned peaks. Yoneyama discloses a method and apparatus for slot timing detection, in a mobile communication system constituted by a mobile and base station. Yoneyama discloses performing a correlation and converting the correlation result into a power value and storing the power values in decreasing order. Therefore, for storing the power values in decreasing order requires ranking the values, these limitations are disclosed in Fig. 9 & Column 3, lines 40-44 & Column 6, lines 3-17, 31-53. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Yoneyama teaches assigning the correlation peaks a value and

ranking the resulting peaks, and this can be implemented in the system as described in the AAPA so as to minimize the storage capacity required for synchronizing the slot timing calculation processing, further reducing the circuit size thus satisfying the limitation of the claim.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhanshu C. Pathak whose telephone number is (571)-272-3038. The examiner can normally be reached on M-F: 9am-6pm.

- If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)-272-3056

Art Unit: 2634

- The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sudhanshu C. Pathak



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